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AN ANALYSIS OF REIMBURSABLE COSTS AND
EXPENSE ITEMS FOR THE BASE OPERATING
SUPPORT CONTRACT AT NAVAL SUBMARINE
BASE BANGOR

by

Randall L. Hoffman

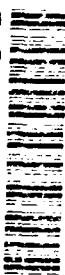
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Since 1977 the use of umbrella-type Base Operating Support Contracts (BOSCs) at Naval installations has increased dramatically. These contracts encompass a number of services for which reimbursements are received. However, little guidance from headquarters has been issued on financial management of this type of contract. Naval Submarine Base (NSB) Bangor was one of the first installations to use a BOSC and is seeking improvements in the financial management areas of allocating the fixed contract price to reimbursable activities and to reportable expense items.

This thesis analyzed contract procedures and related data that were gathered from eight different Naval installations with BOSCs and from NSB Bangor and their current BOSC. The analysis produced four separate recommendations for allocating the fixed contract price to reimbursable activities and the reporting of fixed contract price to various expense items for the current and future BOSC.

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An Analysis of Reimbursable Costs and Expense Items for the Base Operating Support
Contract at Naval Submarine Base Bangor

by

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Lieutenant Commander, Civil Engineer Corps, U.S. Navy
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Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

Since 1977 the use of umbrella-type Base Operating Support Contracts (BOSCs) at Naval installations has increased dramatically. These contracts encompass a number of services for which reimbursements are received. However, little guidance from headquarters has been issued on financial management of this type of contract. Naval Submarine Base (NSB) Bangor was one of the first installations to use a BOSC and is seeking improvements in the financial management areas of allocating the fixed contract price to reimbursable activities and to reportable expense items.

This thesis analyzed contract procedures and related data that were gathered from eight different Naval installations with BOSCs and from NSB Bangor and their current BOSC.

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TABLE OF CONTENTS

I.	INTRODUCTION	1
A.	NATURE OF THE PROBLEM	1
B.	RESEARCH OBJECTIVES	3
C.	SCOPE OF THE STUDY	4
D.	ORGANIZATION	4
II.	BACKGROUND/HISTORY	6
A.	DECISION TO USE BOSC	7
B.	PREVIOUS BOSCs	7
	1.The 1976 Period	8
	2.The Period 1977 - 1987	10
C.	PRESENT BOSC, 1987 - 1992	12
III.	METHODOLOGY AND DATA	16
A.	METHODOLOGY	16
B.	DATA/INFORMATION	19
	1.NSB Bangor	19
	a.Type of BOSC	19
	b.Fixed Price Portion of BOSC for FY90 . . .	19
	c.Reimbursables	19
	d.Expense Items	21

2.NAVSTA Roosevelt Roads	21
a.Type of BOSC	21
b.Fixed Price Portion of BOSC for FY 90 . . .	21
c.Reimbursables	21
d.Expense Items	22
3.NAVWEP/CEN China Lake	22
a.Type of BOSC	22
b.Fixed Price Portion of BOSC for FY90 . . .	22
c.Reimbursables	22
d.Expense Items	22
4.NAS Whidbey Island	22
a.Type of BOSC	22
b.Fixed Price Portion of BOSC for FY90 . . .	22
c.Reimbursables	23
d.Expense Items	23
5.NAS Whiting Field	23
a.Type of BOSC	23
b.Fixed Price Portion of BOSC for FY90 . . .	23
c.Reimbursables	23
d.Expense Items	23
6.NAS Fallon	24
a.Type of BOSC	24
b.Fixed Price Portion of BOSC for FY90 . . .	24
c.Reimbursables	24
d.Expense Items	24
7.NAS Jacksonville	24

a.Type of BOSC	24
b.Fixed Price Portion of BOSC for FY90 . . .	24
c.Reimbursables	24
d.Expense Items	25
8.NAF El Centro	25
a.Type of BOSC	25
b.Fixed Price Portion of BOSC for FY90 . . .	25
c.Reimbursables	25
d.Expense Items	26
9.NSB Kings Bay	26
a.Type of BOSC	26
b.Fixed Price Portion of BOSC for FY90 . . .	26
c.Reimbursables	26
d.Expense Items	26
 IV. DATA ANALYSIS DISCUSSION AND RECOMMENDATIONS . . .	28
A.ALLOCATION OF FIXED PRICE TO REIMBURSABLE ACTIVITIES	28
1.DISCUSSION	28
a.Job Order Booklet	29
b.Specific Lines of Accounting	30
c.Current Percentage Per Annex	31
d.Historical Percentage of Total Contract .	33
e.Use of DID Report Number 2.20	34
f.Use of Tabular Format	34
g.Change Back to FPIF Type Contract	35

h.Status Quo	37
2.Recommendations	37
a.Present BOSC	37
b.Future BOSC	38
B.EXPENSE ITEMS	39
1.Discussion	39
2.Recommendations	40
a.Present BOSC	40
b.Future BOSC	40
 V. SUMMARY AND CONCLUSIONS	42
A.SUMMARY	42
B.CONCLUSIONS	44
 Appendix A: BOSC ANNEXS AND SERVICES AT NSB BANGOR . .	46
Appendix B: EXAMPLE OF FPIF CALCULATIONS	47
Appendix C: BOSC ANNEX PRICES.	48
Appendix D: DATA ITEM DESCRIPTION REPORT 2.20.	49
Appendix E: TABULAR FORMAT	50
 LIST OF REFERENCES	51
 INITAL DISTRIBUTION LIST.	53

I. INTRODUCTION

A. NATURE OF THE PROBLEM

Since 1977, the use of umbrella-type Base Operating Support Contracts (BOSCs) at Naval installations has dramatically increased. BOSCs are used to contract out to the private sector certain or most support functions of Naval installations. In FY90, over \$350 million of services were provided by BOSCs at Naval installations. Two major reasons BOSCs are used at installations are:

- Result of a Commercial Activities (CA) study.
- Civilian personnel ceiling not high enough to adequately perform all the required support functions.

In either case, the result should be a reduction in costs compared with doing the support functions in-house.

Naval Submarine Base (NSB) Bangor was one of the first Naval installations to use a BOSC. The support functions covered under the current BOSC at NSB Bangor are listed in Appendix A. These support functions are not only for NSB Bangor, but also for 23 reimbursable activities that are supported by NSB Bangor. The major reimbursable activities are:

- Trident Refit Facility, Bangor

- Strategic Weapons Facility, Pacific
- Trident Training Facility, Bangor
- Naval Undersea Warfare Engineering Station, Keyport
- Naval Hospital Bremerton

These activities must reimburse NSB Bangor for all support requirements performed for them by the BOSC.

The first two BOSCs, from 1977 to 1987, at NSB Bangor were the firm-fixed price incentive fee type of contract. Under this type of contract, NSB Bangor received cost information from the contractor for the various support functions they provided. In turn, NSB Bangor could use this cost information to determine the amount to charge the reimbursable activities and to determine the amounts for each expense item that they are required to report to higher echelons of command.

The present contract, which started in 1987, is a firm fixed-price award fee type of contract. It has a base year and four option years. Under this contract, the support functions are divided into 22 different annexes. Appendix A lists the annexes and their associated services. Use of annexes is a way to break up and identify the services to be supplied by the contract. The contractor proposes a lump sum price for each annex, with the total of the annexes equalling the contract price for that year. The current contract, base year plus the four option years, has a price of approximately \$200 million. Under this type of contract, actual cost

information is largely meaningless since the "true" price to the government is the agreed-to fixed price. However, since no actual cost information is received, this presents a problem when calculating the charges for reimbursable activities and determining the amounts for each expense item that must report to higher authority.

B. RESEARCH OBJECTIVES

Presently, there is very little guidance, from higher echelon commands, on how to financially manage BOSCs. Each Naval installation with a BOSC is left to their own discretion on how to financially manage it. This does not, however alleviate the installations from their responsibilities to determine how much to charge reimbursable activities for the services provided to them and for reporting amounts for each expense item to higher echelon commands. Reimbursable activities are not left out of this process. Although they normally don't calculate the allocation, they need to agree on the procedure and the amounts to be allocated to them. The primary objective is to determine how NSB Bangor can improve the financial management of its BOSC in the following areas:

- Allocation of the fixed contract price to reimbursable activities.
- Breakdown of the fixed contract price into reportable expense items.

The research for this objective will first examine if there is an approach or the best approach (if there is more than one) to allocate the fixed contract price to reimbursable activities. Also, a method to breakdown the fixed contract price to reportable expense items given the financial data provided by the present contract will be examined. If an appropriate approach or method is not found, the research will look at alternatives to get the required information from future contracts.

C. SCOPE OF THE STUDY

This thesis will concentrate on the improvement of financial management within the two areas described above. Information and data will be compiled from NSB Bangor, other installations with BOSCs, Western Division, Naval Facilities Engineering Command who oversees BOSCs located on most of the West Coast and current instructions and policies.

D. ORGANIZATION

Chapter I introduces the BOSC, its purpose and reasons for using it. Then a brief history of the BOSC at NSB Bangor is given, along with the events that lead up to the problems that NSB Bangor is facing in financially managing the BOSC. In addition, the objectives, scope and organization are presented.

Chapter II takes a more in-depth look at the history and background leading up to present financial management problems associated with the BOSC at NSB Bangor. In addition, the problems will be discussed along with how NSB Bangor is presently handling them.

Chapter III addresses the research methodology used to conduct this study. Also included, are the data and information gathered while conducting the research.

Chapter IV contains the analysis of the data and information gathered during the research. It also summarizes the results of this study, gives conclusions and offers recommendations for improvements to the financial management of the BOSC at NSB Bangor in the areas of:

- Allocation of the fixed contract price to reimbursable activities.
- Breakdown of the fixed contract price into reportable expense items.

Chapter V summarizes the thesis and provides conclusions.

II. BACKGROUND/HISTORY

The missions of NSB Bangor are to provide support to the Trident Submarine Launched Ballistic Missile System and to maintain and operate facilities for administration and personnel support of the submarine force. Additionally, within capabilities, they provide logistic support to other activities in the area. A total of 59 key Trident supported commands and detachments are provided services by NSB Bangor. These services are provided by both in-house personnel and through a BOSC.

In-house services include civilian personnel, utilities, transportation, morale, welfare and recreation, family services, engineering and information technologies. BOSC provided services include public works, security, fire protection, custodial, photographics, reproduction, guard mail, engineering, Bachelor Officer Quarters and Bachelor Enlisted Quarters administration, supply and messing. To provide these services, NSB Bangor receives approximately \$34.9 million in Operation, Maintenance and Navy (OM&N) direct funding and about \$35.9 million in reimbursable funding from various sources.

A. DECISION TO USE BOSC

The consideration to use a BOSC at NSB Bangor was first contemplated in 1974. At this time, NSB Bangor was only in the planning stages. Among other things, the Project Manager, TRIDENT System, had to consider the manning requirements for the operation of the new base. Two major factors influenced the decision of the Project Manager to recommend the use of a BOSC over the establishment of a "traditional" in-house work force. They were:

- Effect of OMB Circular A-76 which establishes contracting as a means of reducing government costs.
- Constraints on civilian ceilings.

The recommendation was forwarded to the Assistant Secretary of the Navy (Ship Building and Logistics) (ASN(S&L)) who approved the recommendation.

B. PREVIOUS BOSCs

Table 1 shows the contracting of base operations history at NSB Bangor.

In chronological order, each period will be discussed in terms of contract type and how it affected NSB Bangor's ability to adequately receive the financial data required for billing reimbursable activities and reporting expense items. Other relevant history for the period will also be included.

TABLE 1. BASE OPERATIONS CONTRACTING HISTORY AT NSB BANGOR

SERVICE	PERIOD	CONTRACT TYPE
BSSC	1976	COST PLUS AWARD FEE
BOSC	1977-1982	FIXED-PRICE INCENTIVE FEE
BOSC	1982-1987	FIXED-PRICE INCENTIVE FEE
BOSC	1987-1992	FIXED-PRICE AWARD FEE

BSSC=Base Service Support contract

BOSC=Base Operating Support Contract

1. The 1976 Period

The first contract was awarded in January 1976 with services starting in February 1976. At that time, the contract was known as a Base Services Support Contract (BSSC) and fell under the auspices of Naval Supply Systems Command. This was only an interim contract with the contract length being one year and the contract type being a cost plus award fee (CPAF). It was only one year in length due to the uncertainties of exactly what the requirements were going to be and what the associated costs would be. A CPAF type contract is only suitable for use when uncertainties in contract performance do not allow costs to be estimated with sufficient accuracy to use any type of fixed price contract.

[Ref. 1]. Because NSB Bangor was a new base and the support functions had not been performed before (i.e., a new start of operations), this was an appropriate selection of contract type.

During this interim contract, a management and economic study was performed by a contracted consultant. The purpose was to determine if the support functions should continue on a contract basis or should be provided in-house by the government. They concluded that, based on total costs, the base operating support functions should be provided by a contractor. Their baseline estimated figures for 1976 were \$13.2 million for in-house forces to provide the services and \$12.3 million for the same services being provided by a contractor. Thus, contracting out support services would save \$0.9 million annually. [Ref. 2]

Under a CPAF type contract, the contractor is required to report to the government the actual costs incurred such as labor and materials to perform all the services required by the contract. By having the actual cost information provided to them, NSB Bangor was able to accurately determine the costs for the services that were performed for all reimbursable activities. Reimbursable activities are required to pay the supporting installation for services received. NSB Bangor was also able to use this actual cost data to determine the reportable expense items.

2. The Period 1977 - 1987

Based on the results of the economic and management study, ASN(S&L) approved the continuance of contracting out of NSB Bangor's support functions. The responsibility for contracting was shifted to Naval Facilities Engineering Command (NAVFAC). This decision was made because most of the services that were to be performed under the contract were public works type and fell in the NAVFAC arena vice NAVSUP.

NAVFAC proceeded to develop the BOSC for NSB Bangor. This was to be the first BOSC used in the Navy. Because required performance information was now available from the earlier BSSC contract, costs could be estimated with reasonable accuracy. Therefore, the decision was made by the Contracting Office to use a Fixed-Price Incentive Fee (FPIF) type of contract. The use of FPIF type contract instead of a Firm Fixed-Price (FFP) type contract is based on how much responsibility the government wants the contractor to have on costs. Under a FFP type contract, the contractor is paid only the negotiated amount. Any costs over or under that negotiated amount are the contractor's responsibility. Thus, the risks are transferred to the contractor.

Under a FPIF type contract, there are these basic elements; Target Cost, Target Profit, Ceiling Price and Share Ratio. The contractor is essentially reimbursed for all costs related to the performance until the costs reach the negotiated limit. At the end of the contracting period the

contractor provides a statement of costs. This statement will reflect the actual negotiated costs compared to the Target Cost. Any cost difference will result in an incentive cost adjustment (increase or decrease) based on the predetermined Share Ratio. Appendix B provides an example. A Request for Proposal (RFP) was issued for a competitively negotiated procurement. A contract was awarded with performance beginning on 1 October 1977.

This initial BOSC contract was for a base year and four option years. All four option years were exercised which extended the performance on this contract through 30 September 1982. In the last option year, a virtually identical contract for follow-on services was solicited. As before, the contract was for a base year and four option years and the procurement was to be competitively negotiated. The contract was awarded with performance starting on 1 October 1982. Again, all four option years were exercised which extended the performance of the contract to 30 September 1987.

Although not a CPAF type contract, the FPIF type contract gave NSB Bangor the cost data that they needed. This cost data provides a breakdown of the total negotiated contract amount for all the services provided. The contractor, under this type of contract, was required to provide cost data so that their profit could be determined by the government. Although not specifically designed or gathered for that purpose, the cost data provided by the

contractor was used by NSB Bangor to determine the amount to charge reimbursable activities for services provided and for determining appropriate amounts for expense items such as material and labor that are required for use in developing financial reports required by higher authority.

C. PRESENT BOSC, 1987 - 1992

During the final option year (1987) of the previous BOSC, NSB Bangor, with NAVFAC approval, planned on using a third FPIF contract. However, during the solicitation period, ASN(S&L) directed that the contract type be changed to a Firm Fixed-Price Award Fee (FPAF) with a base year and four pre-priced option years. The reasons for the change was to allow the government to subjectively evaluate the contractor's performance in management and customer service independent of the fixed price of the contract and to lower the cost through competitive bidding

In certain cases, it may be desirable to motivate and reward a contractor for management performance over and above that which can be objectively measured and incentivised under other forms of government contracts. For example, logistics support, quality, timeliness, cooperation, ingenuity, and cost effectiveness are areas under the control of management which may be susceptible only to subjective measurement evaluation. [Ref. 3]

The contract was awarded with performance starting on 1 October 1987. So far, three of the four pre-priced option years have been exercised.

Appendix C shows what financial data that the contractor submits under this FPAF contract. This data is the contractor's lump sum proposal amount, per annex, to provide the support functions specified in each annex. As an example the amount to provide services in Annex 3 (Public Works Support Services) is \$908,010. Annexes are used as a means to more easily identify the requirements of the contract grouped by specific services to be performed. Each annex can and usually does contain more than one support function in it. As an example, Annex 8 contains grounds/ ground structures maintenance and pest control services. Also, some support functions are spread over more than one annex. As an example, emergency and service work requirements can be found in Annexes 4, 8, 9 and 21. If NSB Bangor doesn't get the information on what each support function costs, subsequently the charges for reimbursable activities and the amounts for each expense item that they report cannot be determined.

Since the annexes between the two contracts didn't substantially change, NSB Bangor generated the financial data by taking historical percentage information for each annex from the previous FPIF contract and applying it against the lump sum amount for each annex under the current contract. The historical percentage information was based on what amount of the total annex amount was due to each reimbursable activity charged under the FPIF contract. A historical percentage was generated for each reimbursable activity for

each annex. Multiplying the appropriate percentages times the current lump sum annex amount allocates cost amounts for the reimbursable activities.

TABLE 2. PERCENTAGE OF ANNEXES FOR REIMBURSABLE ACTIVITIES

COMMAND	ANNEX 9	ANNEX 10	ANNEX 16
TRF	7.99%	7.59%	9.98%
SWF	14.19%	11.16%	12.23%
TTF	10.87%	.15%	.61%
NHB	8.72%	.68%	1.49%
NUSES	11.90%	32.11%	.91%

TRF=TRIDENT REFIT FACILITY

SWF=STRATEGIC WEAPONS FACILITY

TTF=TRIDENT TRAINING FACILITY

NHB=NAVAL HOSPITAL BREMERTON

NUSES=NAVAL UNDER SEA ENGINEERING STATION, KEYPORT

Table 2 provides a partial listing of reimbursable activities and their historical percentages for certain annexes for FY91. As an example, suppose the contractor's amount for providing the services in Annex 9 is \$500,000. Trident Refit Facility's share would be \$500,000 x 7.99% =

\$399,500. Adding the amounts for each annex gives a total amount to charge the reimbursable activities for services performed under the contract.

For reportable expense items, NSB Bangor also uses historical percentages. From the previous FPIF contract, they know what percentage each expense item was of the total contract amount. To get the amount for the current reportable expense items, they multiply the calculated historical percentages times the current contract amount.

The major problem of continuing to use these calculations is that the further in time you get from the point when the percentages were calculated (1987), the more inaccurate the computed amounts become. Changes occur to the contract over time for the amount of services to be provided. As an example, new buildings are built, which would require more janitorial services. These changes could be for one specific reimbursable customer, which should increase their percentage amount for the appropriate support functions and lower the percentage amount for the other reimbursable customers. As it currently is, the historical percentages stay the same and all reimbursable customers pay for a portion of the incremental activity change, even though they shouldn't.

III. METHODOLOGY AND DATA

A. METHODOLOGY

No formal guidance has been issued to Naval installations on how to financially manage BOSCs in the areas of:

- Allocation of the fixed contract price to reimbursable activities.
- Breakdown of the fixed contract price into reportable expense items.

Therefore, each individual installation's management is free to determine the procedures that they will use. Since there is no prescribed model or procedure to use or no right or wrong way, the emphasis is on determining the most appropriate way for NSB Bangor to accomplish these tasks.

To evaluate the most appropriate set of procedures for NSB Bangor, a three step research approach was taken:

- First, determine what NSB Bangor is currently doing and determine what financial information is provided by their current BOSC.
- Second, conduct a survey of other Naval installations that have a BOSC and gather information on what allocation and reporting procedures they are using.
- Third, use the gathered information to determine the most appropriate way for NSB Bangor to financially manage their BOSC in the two areas described above.

This methodology was chosen as it appeared to be the only approach to gather information on which to analyze and make recommendations. No information was found in the review of existing literature, nor were any models found that would assist in making recommendations. Personal interviews were used vice questionnaires because additional questions can be asked in response to answers given. Plus, there was very little knowledge to structure a questionnaire.

The information from NSB Bangor was gathered during meetings at the installation with the Comptroller and Contracting personnel [Ref. 4 and Ref. 5].

A systematic approach was taken to gather the information from other Naval installations with a BOSC. NAVFAC was contacted to get a listing of such installations [Ref 6]. Eight installations were selected that had either a FFP or FPAF type BOSC. An installation that uses either type of BOSC will have developed a way to allocate the fixed price to reimbursable activities. Also, they will have determined the appropriate amounts of the fixed price to be reported under the various expense items. So, information gathered from an installation using either type is appropriate.

Seven of the selected installations are within the continental United States and one of them is an overseas installation. They were selected for their diversity in geographical area and for their diversity in the type of installation. They also had to have reimbursable activities

that received services from the BOSC. They selected installations are:

- US Naval Station (NAVSTA) Roosevelt Roads, Puerto Rico
- Naval Weapons Center (NAVWEPCEN) China Lake, California
- Naval Air Station (NAS) Whidbey Island, Washington
- Naval Air Station (NAS) Whiting Field, Florida
- Naval Air Station (NAS) Fallon, Nevada
- Naval Air Station (NAS) Jacksonville, Florida
- Naval Air Facility (NAF) El Centro, California
- Naval Submarine Base (NSB) Kings Bay, Georgia

To gather the information from each installation, personal telephone interviews were used. Each installation was asked four questions:

- What type of BOSC is currently being used?
- What was the amount of the fixed-price portion of the BOSC for FY90?
- On what basis is the firm fixed-price portion of the BOSC allocated to reimbursable activities?
- How is the firm fixed-price portion of the BOSC broken down into reportable expense items?

Based on the scope of the thesis, the questions were limited to the four above. The first two questions provide general information on the type and size of the BOSC at the installation. The second two questions provide the mechanism

to gather the information that is relevant for analysis and recommendations.

B. DATA/INFORMATION

1. NSB Bangor

a. Type of BOSC

FPAF is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$27.8 million.

c. Reimbursables

The information on how NSB Bangor did and are presently determining the amounts of the contract's fixed price to charge reimbursable activities is discussed in Chapter II. Information was also gathered in two other areas to help formulate and determine the recommendations not only for the remainder of the current BOSC, but also for the next BOSC. These two areas are:

- Information provided by the current BOSC not being used by NSB Bangor for determining the allocation of the fixed contract price to reimbursable activities.
- Any proposed changes that may be incorporated in the solicitation for the FY92-FY97 BOSC.

Currently, the only information provided by the current BOSC that is being used by NSB Bangor for determining allocation of the fixed price to reimbursable activities is the contract's fixed price broken down by annex. After

reviewing the contract and the reports it requires from the contractor, only one report was found that may produce information that could possibly be used for determining allocation of the fixed contract price over the spectrum of all the annexes. It is Data Item Description (DID) Report Number 2.20. The title of the report is "FY 1990 and Subsequent Year BOS Lump Sum Manhour Quarterly Report". The contractor is actually required to provide two reports. They are:

- BOS Lump Sum Quarterly Manhour Report by Command/By Annex
- BOS Lump Sum Quarterly Manhour Report by Annex/By Command

Appendix D contains the complete Data Item Description.

There is one major change from the current BOSC that is being considered for implementation into the solicitation for the FY92-FY97 BOSC. This change is to convert the contract to a Tabular Format. The Contracting Office at NSB Bangor decided that, by going to this format, it may help alleviate some of the allocation problems that the Comptroller Office was having.

Appendix E shows what the Tabular Format looks like and what information it will contain. Each annex will have a separate table containing the information specific to it. The section of the Tabular Format that will contain information that can be used for allocation of the fixed contract price and determination of amounts of the various expense items is

the Work Load section. This section of the table provides information on the quantity of services the government anticipates and expects the contractor to provide. These quantities will be in measurable units such as square footage and man-hours.

d. Expense Items

As discussed in Section II.B, NSB Bangor uses a historical percentage method to determine how much to report under the different expense items. From the previous FPIF contract, they know what percentage each expense item was of the total contract amount. To get the amount for the current reportable expense items, they multiply the calculated percentages times the current contract amount.

2. NAVSTA Roosevelt Roads

a. Type of BOSC

FFP is used.

b. Fixed Price Portion of BOSC for FY 90

Approximately \$5.0 million.

c. Reimbursables

For each annex, a measurable unit was determined. There may be more than one measurable unit in each annex, but only the major one is used. The total number of units is known for each annex as well as the number of units that are associated with each reimbursable activity. A percentage is then determined, per annex, for each reimbursable activity by

taking their associated units and dividing by the total number of units. To get the amount to charge each reimbursable activity, the calculated percentages are multiplied against the contractor's price per associated annex. The amount for each annex are added up to get the total amount.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 7]

3. NAVWEPCEN China Lake

a. Type of BOSC

FFP is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$14.0 million.

c. Reimbursables

They are determined the same way as at NAVSTA Roosevelt Roads.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 8]

4. NAS Whidbey Island

a. Type of BOSC

FFP is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$7.7 million.

c. Reimbursables

Per the contract, the contractor is issued a Job Order Booklet by the government. This booklet contains Job Order Numbers (JONs). Each JON identifies a specific type of work for a specified activity. When the contractor submits his invoice, it is broken down by JON. Therefore, the appropriate amount to charge each reimbursable activity can be determined by adding up the amounts of the JONs associated with them.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 9]

5. NAS Whiting Field

a. Type of BOSC

FPAF is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$2.5 million.

c. Reimbursables

They are determined the same way as at NAS Whidbey Island.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 10]

6. NAS Fallon

a. Type of BOSC

FFP is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$12.1 million.

c. Reimbursables

No specific procedure has been implemented. They concur that it is a problem and that they are working on it.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 11]

7. NAS Jacksonville

a. Type of BOSC

FPAF is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$10.0 million.

c. Reimbursables

Instead of calculating a percentage per annex for each reimbursable activity, a single percentage for each reimbursable activity is determined. This percentage is then applied against the total fixed price of the contract amount for determining the reimbursable activity's appropriate portion. The data used for determining the single percentages were taken from the last year that an in-house work force was used. With the use of an in-house work force, accurate

information is kept on exactly what work was done and for whom. Also, totals for all the different types of work or services is kept. Therefore, the services provided by the BOSC can be compared with the total amount for the in-house work force to provide the same services. That total amount contains the amounts for each reimbursable activity and thus percentages can be computed for them by dividing their amount by the total amount.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 12]

8. NAF El Centro

a. Type of BOSC

FFP is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$5.5 million.

c. Reimbursables

The contract requires that the contractor invoice the fixed price of the contract by specific lines of accounting. These specific lines of accounting are broken down by activities. Using this approach the exact amount of the fixed contract amount can be billed to reimbursable activities.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 13]

9. NSB Kings Bay

a. Type of BOSC

FPAF is used.

b. Fixed Price Portion of BOSC for FY90

Approximately \$28.0 million.

c. Reimbursables

They use a combination of two methods to determine the allocation of the fixed contract price to reimbursable activities. For a portion of it, they use historical data from the last FPIF type BOSC. This is the same method used by NSB Bangor. For the remainder, they require the contractor to provide cost data.

d. Expense Items

They report all of the fixed contract price as expense item Q. [Ref. 14]

Table 3 provides a summary of the information provided by the eight installations surveyed on how they are allocating to reimbursable activities and reporting to various expense items the fixed contract price.

TABLE 3. SUMMARIZATION OF INFORMATION

INSTALLATION	METHODS USED FOR REIMBURSABLE	EXPENSE
NAVSTA Roosevelt Roads	Current % per annex	All Q
NAVWEPCEN China Lake	Current % per annex	All Q
NAS Whidbey Island	Use of JOB	All Q
NAS Whiting Field	Use of JOB	All Q
NAS Fallon	No specific procedure	All Q
NAS Jacksonville	Historical% of total contract	All Q
NAF El Centro	Specific accounting lines	All Q
NSB Kings Bay	Historical data/cost info	All Q

As the information in Table 3 shows, the eight installations surveyed are using four different methods than NSB Bangor to determine allocation of the fixed contract price to reimbursable activities. NSB Kings Bay's procedure is almost identical to that of NSB Bangor. All eight of the installations report the total fixed contract price as expense item Q. In the next chapter, these four different procedures, plus other possibilities discussed in this chapter, will be analyzed in terms of advantages and disadvantages for NSB Bangor using them. The reporting of the fixed contract price in various expense items will also be discussed.

IV. DATA ANALYSIS DISCUSSION AND RECOMMENDATIONS

This chapter provides an analysis and discussion of the information contained in Chapter III and then provides recommendations. The first section will deal with the allocation of the fixed contract price to reimbursable activities. The second section will deal with the breakdown of the fixed contract price into reportable expense items. Each section will start with a discussion and then provide recommendations on what to do both during the remainder of the present BOSC and for the future one that will start in FY92.

A. ALLOCATION OF FIXED PRICE TO REIMBURSABLE ACTIVITIES

1. DISCUSSION

Of the eight Naval installations surveyed, there were four different procedures being used to allocate the fixed contract price to reimbursable activities. During investigations of the current contract and proposed changes to the future BOSC, two additional procedures for possibly determining allocations were found: 1) use of DID Report Number 2.20 and 2) use of the Tabular Format. One other possibility is going back to a FPIF type contract where actual cost data is provided by the contractor. There are a total of seven different procedures:

- Use of Job Order Booklet
- Specific Lines of Accounting
- Current Percentage Per Annex
- Historical Percentage of Total Contract
- Use of DID Report Number 2.20
- Use of Tabular Format
- Change Back to FPIF type Contract

These seven different procedures will be discussed below.

Also we will examine how NSB Bangor is currently handling the allocation will be discussed in terms of the possibility of using them for both the present and future BOSC.

a. Job Order Booklet

NAS Whidbey Island and NAS Whiting Field, as part of the contract, issue a Job Order Booklet to the contractor. This booklet contains JONs that identifies specific work for specified activities. As an example, a JON might be for repair of air conditioners for a specific reimbursable activity. A different JON would be used for repair of air conditioners for a different reimbursable activity. The contractor breaks down his invoice by these JONs, so it is then known how much of the invoice amount is attributable to each reimbursable activity. The advantage of determining the allocation of the fixed price by this method is that it should be very accurate. The accuracy of course is dependent on the contractor billing the correct amounts under the correct JONs.

The contractor has no incentive to be real accurate. As an example, suppose he spent 12 hours repairing air conditioners in a given invoice period. He could invoice the amount for seven man-hours to one JON and the amount for five man-hours to another JON or vice versa. Unless the government is constantly monitoring each of the contractor employees, no one is going to know the difference.

There are several disadvantages for NSB Bangor to use this method both under the present and future BOSC. Under the present BOSC, there would have to be a modification to the contract. The contractor would want a monetary increase for additional data gathering. They would claim that additional work would be required. This method would also require additional work on the part of the government to design the data gathering system. They would have to develop the Job Order Booklet and the associated JONs. The disadvantages would be the same for a future contract, except the contractor would probably increase their proposal amount vice the increase coming from a modification.

b. Specific Lines of Accounting

NAF El Centro uses the specific lines of accounting method. The contract spells out specific lines of accounting that the contractor must attach dollar amounts to when he submits his invoice. These specific lines of accounting are identifiable to activities. As an example, a single line of

accounting may be used for invoicing all work performed for a specified reimbursable activity or the lines of accounting may be more specific. A line of accounting may be used for invoicing all janitorial work for a specified reimbursable activity. Thus, the amount to charge reimbursable activities is known.

The advantages and disadvantages of this system are the same as under Job Order Booklets. The advantage is that allocation of the fixed price based on this method should be accurate as long as the contractor accurately bills the right amount under the appropriate lines of accounting. The disadvantages are that it would require a change in the contract and the contractor would want a monetary increase. Also, using this method would require additional work by the government. They would have to develop the lines of accounting and determine how many and how specific.

c. Current Percentage Per Annex

NAVSTA Roosevelt Roads and NAVWEPSEN China Lake use this method. For each annex, a measurable unit such as square footage was determined. The total number of units for each annex and the amount of the total units that are associated with each reimbursable activity is known. The amount to charge the reimbursable activities for each annex is determined by dividing their associated unit amount by the total unit amount and then multiplying that percentage times

the contractor's price for the annex. As an example, the contractor's amount for a janitorial annex is \$100,000. Square footage is the unit of measurement for that annex. The installation has a total of 100,000 square feet (SF) of buildings to receive janitorial services. Of this amount, a specific reimbursable activity has 10,000 SF. The amount that is allocable to them is 10,000 SF divided by 100,000 SF times \$100,000, which is \$10,000.

NSB Bangor would be unable to use this method under the current BOSC. Although they are working on it, the total number of measurable units for each annex and the amount associated with each reimbursable activity are yet to be determined. This method could be used for the next BOSC if the measurable units and the associated amounts are determined by NSB Bangor. The advantage would be not having to rely on the contractor to accurately breakdown the work by JON or by lines of accounting. The disadvantage is that it would not be completely accurate. Annexes may have more than one measurable unit in it for different types of work. As an example, consider a grounds maintenance annex. It may include grass cutting, which could have a measurement unit of SF. This same annex may also have encompass tree trimming, which would have a different measurement unit. Under this method, only the major measurable unit is used.

d. Historical Percentage of Total Contract

NAS Jacksonville uses Historical Percentage of Total Contract method. A single percentage verses a percentage per annex is developed for each reimbursable activity. Historical data from the last year an in-house work force was in place is used for determining the single percentage for each reimbursable activity. Allocation of the fixed contract price to each reimbursable activity is calculated by multiplying their single percentage times the total fixed contract price. As an example, \$500,000 in material and labor was used in the last year that an in-house work force was in place to complete the same work now being provided by the BOSC. Of this \$500,000, the amount attributable to a specific reimbursable activity is \$50,000. Their single percentage is 10 percent.

NSB Bangor could not use this specific method as they never had an in-house work force. They could develop single percentages for each reimbursable activity to be applied against the total fixed contract price. This could be based on a single measurable unit. However, this would not be near as accurate as developing percentages, per annex, for each reimbursable activity.

e. Use of DID Report Number 2.20

DID Report Number 2.20 is a requirement of the present contract. It requires the contractor to provide the following information:

- BOS Lump Sum Quarterly Manhour Report by Command/by Annex
 - BOS Lump Sum Quarterly Manhour Report by Annex/by Command
- Percentages for each reimbursable activity, per annex, could be developed by using man-hour as the measurable unit. The advantage is that the data are already required by the contract and little work would be required to develop the current percentages. The disadvantage is that NSB Bangor would have to ensure the man-hours reported by the contractor are accurate. The contractor devotes extensive man-hours each quarter in fulfilling the contract requirements. To ensure they are accurately reported to the proper command and annex would require fairly extensive record keeping on the part of the contractor. Although contractually he is required to, the contractor has no real incentive to keep accurate records on what annex and for what command the man-hours are expended. He is not paid on this basis. This method could be used both for the current and future BOSC.

f. Use of Tabular Format

Appendix E illustrates the Tabular Format and describes the information it contains. Each annex will have a separate table containing the information specific to it.

The advantage of using this method is accuracy. The Work Load section of the table for each annex will provide information on the quantity of services the government anticipates and expects the contractor to provide. These quantities will be in measurable units. All measurable units and the amounts in each annex will be provided. This way when percentages are calculated for reimbursable activities, they will be based on all measurable units in the annex not just the major one. These are also current percentages as opposed to historical ones as in other alternatives. Another advantage is that NSB Bangor will not have to rely on the accuracy of the data provided by the contractor.

The disadvantage is that a considerable amount of effort will be required by the government to develop the information to go into the Tabular Format. The measurable units, total amount of each measurable unit and the amounts of the totals that are associated with each activity will have to be determined for each annex. However, the Contracting Office at NSB Bangor is currently doing this and will have it completed by the time the solicitation is issued for the next BOSC.

g. Change Back to FPIF Type Contract

This is not an option for the present contract. However, NSB Bangor could request that the next BOSC be of that type. The major advantage would be the cost data that

the contractor is required to provide under a FPIF contract.

The Comptroller Office at NSB Bangor, however, wants to stay with a FPAF type contract based on the statement below.

The FPAF type contract compared to the FPIF type contract is, from a financial point of view, a preferable contracting method to use because it provides financial managers with controlled costs for financial planning. The FPAF is appropriate where improved performance or schedule is desired and technical and cost uncertainty is low. The contract price (cost and profit) is agreed to before the contract is awarded and the price remains the same through the life of the contract unless revised, then the new negotiated amount becomes the firm cost. The contractor accepts full responsibility for the cost of the contract and for his profit or losses. The Award Fee cost is included in the contract and provided as an added incentive to encourage the contractor to efficiently manage the contract. On the other hand, the FPIF is appropriate where confidence in achieving performance is high but cost and technical uncertainty can be reasonably identified. The contract includes these basic elements; Target Cost, Target Profit, Ceiling Price, Share Ratio. The contractor is essentially reimbursed for all costs related to the performance until the costs reach the negotiated limit. At the end of the contracting period the contractor provides a statement of costs. This statement will reflect the actual negotiated contractors costs compared to the Targeted Cost. Any cost difference will result in an incentive cost adjustment (increase or decrease) to the contract based on the predetermined Share Ratio. The final negotiated contract price is unknown until the incentive amount is negotiated and included in the contract. Often this transition is not completed until after current fiscal year has lapsed, which adversely effects financial statements and could result in a short-fall of available funding to cover the unknown liability amount. The FPAF provides a firm contract price and a known ceiling Award Fee amount which enable financial managers to effectively plan and budget their funds. We also firmly believe that we receive a more competitive and less expensive price under a FPIF type contract. [Ref. 15]

h. Status Quo

NSB Bangor currently uses historical percentages, per annex, to determine the amount that each reimbursable activity is responsible for. These percentages were developed from cost data provided by the last FPIF type BOSC. Chapter II provides additional information on how these percentages were developed. The advantage of maintaining status quo is nothing has to be changed. The disadvantage is the accuracy of the percentages. Data used to develop the percentages was from FY 1987. The further from FY 1987 the more inaccurate the percentages can become. Changes occur to contract operations over time.

2. Recommendations

a. Present BOSC

If the man-hours, submitted in DID Report 2.20 can be verified as accurate, it is recommended that the DID method be used to determine allocation of the fixed contract price to reimbursable activities. Little work would be required to determine the current percentages and they would be more accurate than staying at status quo. Additionally, no changes would be required to the present contract.

If the man-hours are found to be inaccurate or a large amount of government time would be spent trying to verify them, which NSB Bangor will have to determine, it is

recommend that status quo be maintained. The main reason is that there is less than a year left under the current BOSC and it would not be worth the time or money to try and incorporate another one of the methods discussed. By the time the appropriate information was gathered and the change negotiated and incorporated into the present BOSC, it would be almost completed.

b. Future BOSC

It is recommended that the Tabular Format method be used for the next BOSC. Additionally, it is recommended that the contractor break down his proposal amount per annex into amounts for each of the measurable units in the annex. This method will produce the most accurate percentages for each measurable unit in the annexes and the dollar amount on which to apply them against. This method will also allow NSB Bangor to calculate unit costs which are likely to be required in the near future. The contract will not require the contractor to provide any additional information, except for breaking down his proposal per annex, so a price increase for that reason should not be anticipated. Additionally, because the contractor is not providing the data on which the amounts to charge reimbursable activities is determined, NSB Bangor will not have to worry about its accuracy. NSB Bangor will not develop a Job Order Booklet or develop specific lines of accounting.

B. EXPENSE ITEMS

1. Discussion

All eight of the Naval installations surveyed report all of the fixed contract price as expense item Q. Comptroller of the Navy Manual (NAVCOMTPMAN) also states the all work performed by a contract should be reported as expense item Q [Ref. 16]. Based on this information, NSB Bangor was contacted to gather additional information on why this was a problem and why they did not just report all of the fixed contract price as expense item Q. They stated that in the various reports there is a requirement to further breakdown the expense item into Activity Groups (AGs), Sub-Activity Groups (SAGs) and Cost Accounting Codes (CACs). By reporting all of the fixed contract price as expense item Q, the same problem arises on what bases to use for allocating the fixed contract price into AGs, SAGs and CACs. [Ref. 17]

The problem of further breakdown of expense items was not part of the original scope of this thesis and was not investigated. Additionally, that question was not posed to the Naval installations that were surveyed. However, research is underway that in part deals with that problem.

2. Recommendations

a. Present BOSC

It is recommended that the fixed contract price all be reported under expense item Q. The further breakdown should be done the same way as is presently being done to allocate the fixed contract price to the various expense items. This way at least all of the work performed by the BOSC is being accurately reported as expense item Q. No other way was found to accomplish this with the data provided by the current contract. A change could be made to the contract that requires the contractor to provide the required data. However, this is not recommended as there is less than a year left on the current contract. The change would not only cost more money it probably would not be finalized until near the point of completion of the contract.

b. Future BOSC

By going the Tabular Format with the contractor breaking down his proposal per annex into amounts for each measurable unit in that annex, NSB Bangor will be able to get the data needed for breaking down the expense items into Ags, SAGs and CACs.

This chapter analyzed eight different procedures for use in allocating fixed contract price to reimbursable activities. The analysis was done in terms of advantages and disadvantages for both for the current and future BOSC at NSB

Bangor. The reporting of the fixed contract price in various expense items was also analyzed. The analysis produced four separate recommendations. They were for allocation of fixed contract price and reporting of fixed contract price to various expense items for the current and future BOSC.

V. SUMMARY AND CONCLUSIONS

A. SUMMARY

Since going to a FPAF type BOSC contract in 1987, NSB Bangor does not receive detailed cost breakdown data from the contractor on services performed that it had from previous BOSCs. These data were being used for among other things to:

- Determine how much to bill reimbursable activities for services they received from the BOSC.
- Determine how much of the fixed contract price to be reported under various expense items.

For the fixed price of the contract, NSB Bangor now receives from the contractor only a lump sum amount per annex. The questions NSB Bangor posed and were the basis of this thesis are:

- How to allocate the fixed contract price to reimbursable activities?
- How to breakdown the fixed contract price into reportable expense items?

To evaluate and determine the most appropriate set of procedures for NSB Bangor to deal with the questions stated above, a three step research approach was taken. First, determine what NSB Bangor is currently doing. Second, conduct a survey of other Naval installations that have a BOSC, either

a FPAF of FFP type, and gather information on what allocation and reporting procedures they are using. Third, use the gathered information to determine the most appropriate way for NSB Bangor to handle the two questions for both the current and future BOSC.

Between the eight installations surveyed and information gathered from NSB Bangor and their current BOSC, seven different procedures were found that might be used for allocation of the fixed contract price to reimbursable activities. These seven procedures, plus maintaining status quo, were analyzed. Recommendations from the analysis are:

- For current BOSC maintain status quo.
- For future BOSC go to Tabular Format with the contractor breaking down his price per annex for each measurable unit that is included in that annex.

All eight of the installations surveyed report all of the fixed contract price as expense item Q. Since all the installations were doing it the same way, NSB Bangor was contacted to determine why this was a problem. They stated that in various reports there is a requirement to further breakdown the expense items. By reporting all of the fixed contract price as expense item Q, the same problem arises as to what base to use to allocate the fixed contract price into the required expense item breakdown. This problem was not a part of the original scope of this thesis and the eight installations surveyed were not asked on how they deal with

that problem. However, an analysis was done with information gathered from NSB Bangor and their current BOSC. The analysis provided the following recommendations:

- For the current BOSC report the total fixed contract price as expense item Q. Breakdown the expense item Q on the same basis that is being used currently to breakdown the fixed contract price into various expense items.
- For future BOSC report the total fixed contract price as expense item Q. Additionally, go to the Tabular format with the contractor breaking down his price per annex for each measurable unit in that annex. This procedure will give NSB Bangor the data they need to breakdown the expense item into the required subgroups.

B. CONCLUSIONS

As the survey of installations and information gathered from NSB Bangor and their BOSC has shown, there are numerous procedures that are and could be used for allocation of a fixed contract price to reimbursable activities. This thesis only analyzed the procedures and made recommendations in respect to what would be most appropriate for NSB Bangor. These recommendations may or may not be the most appropriate for other installations, especially in terms of current BOSCs. Each installation would have to make a determination if the cost information they are currently receiving is adequate and conversely if it is not, is the cost of a change worth the additional information that they would receive.

In terms of considerations for future BOSCs, the Tabular Format being developed by NSB Bangor is a procedure that deserves attention by installations and NAVFAC, especially if

unit costing for services provided by a BOSC becomes a requirement. Other than developing the appropriate measurable units and the associated amounts, this method appears to require the least government administrative effort and would only require the contractor to breakdown his price per annex. Again, it may not be appropriate for every installation with a BOSC and the decision should be left up to them. Since individual installations are the ones who best know what information they currently have and what information they need, they are in the best position to determine what procedure to use. However, they should be informed of all the options available. This may be an area that NAVFAC should examine if not already being done.

The reporting of the fixed contract price into expense items and various subgroups is a requirement for all installations. There are explicit requirements on what and how the information is to be reported. The reporting of the fixed contract price as expense item Q is appropriate. Although not explicitly covered by this thesis, breaking the fixed contract price down into subgroups such as AGs, SAGs and CACs is a problem. Recommendations were made for NSB Bangor. However, NAVCOMP and NAVFAC, who have oversight on most of the required reports, should look at the problem.

APPENDIX A. BOSC ANNEXES AND SERVICES AT NSB BANGOR

**Naval Submarine Base, Bangor
Base Operating Services Contract
Annexes and Services**

- | | |
|---|---|
| <i>1 - Information</i> | <i>12 - Hazardous Waste/Spill Response</i> |
| <i>2 - Administrative Support</i> | <i>13 - Supply</i> |
| <i>3 - Public Works Support</i> | <i>14 - Mess Attendant</i> |
| <i>4 - Family Housing Maintenance</i> | <i>15 - BOQ/BEQ Operations</i> |
| <i>5 - Custodial</i> | <i>16 - Guard Mail</i> |
| <i>6 - Custodial (Naval Hospital)</i> | <i>17 - Fire Protection</i> |
| <i>7 - Photographic/Graphics Arts</i> | <i>18 - Security</i> |
| <i>8 - Grounds/Grounds Structures
Maintenance and Pest Control</i> | <i>19 - Facilities Maintenance Support</i> |
| <i>9 - Utilities Maintenance
and Operation</i> | <i>20 - Engineering</i> |
| <i>10 - Transportation Vehicles/Equipment
Maintenance and Operation</i> | <i>21 - Building/Structures Maintenance</i> |
| <i>11 - Refuse Collection and Disposal</i> | <i>22 - Crane Maintenance</i> |
| | <i>23 - Crane Maintenance (SWFPAC)</i> |

APPENDIX B. EXAMPLE OF FPIF CALCULATIONS

TARGET COST	\$10,000,000
TARGET PROFIT	\$850,000
TARGET PRICE	\$10,850,000
PRICE CEILING	\$11,500,000
SHARE	70/30

EXAMPLE #1

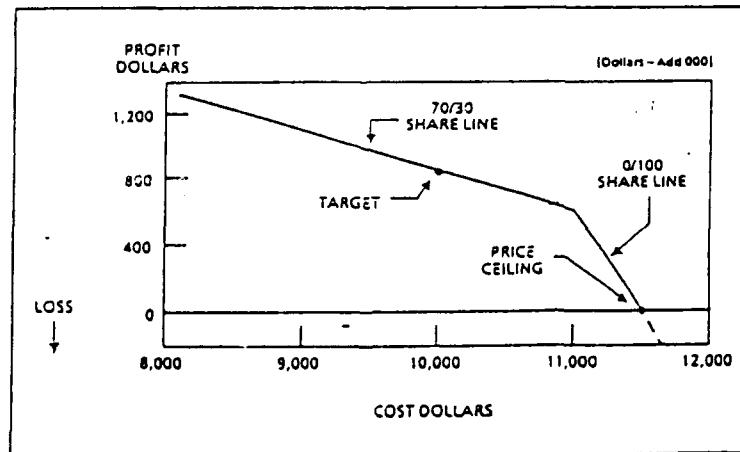
TARGET COST	\$10,000,000
FINAL NEGOTIATED COST	<u>\$9,600,000</u>
DIFFERENCE	\$400,000

CONTRACTORS INCREASE IN PROFIT	(\$400K X .30)
	\$120,000

FINAL PROFIT (\$850K + \$120K) \$970,000

FINAL NEGOTIATED COST	\$9,600,000
FINAL PROFIT	<u>\$970,000</u>
FINAL PRICE TO GOVT	\$10,570,000
TARGET PRICE	\$10,850,000
PRICE REDUCTION	\$280,000

FIGURE I-10. FPIF ARRANGEMENT



APPENDIX C. BOSC ANNEX PRICES

SCHEDULE OF LUMP-SUM WORK

			<u>QUANTITY</u>	<u>UNIT</u>	<u>AMOUNT</u>
000401	Annex 2	Administrative Support Services	1	Lot	\$ 1,467,380
000402	Annex 3	Public Works Support Services	1	Lot	\$ 834,904
000403	Annex 4	Family Housing Maintenance Services	1	Lot	\$ 1,169,950
000404	Annex 5	Custodial Services	1	Lot	\$ 1,040,453
000405	Annex 6	Custodial Services (Naval Hospital, Bremerton)	1	Lot	\$ 613,456
000406	Annex 7	Photographic/Graphic Arts Services	1	Lot	\$ 272,194
000407	Annex 8	Grounds/Ground Structures Maintenance & Pest Control Services	1	Lot	\$ 915,843
000408	Annex 9	Utilities Maintenance and Operation Services	1	Lot	\$ 3,415,461
000409	Annex 10	Transportation Vehicles/Equipment Maintenance & Operations Services	1	Lot	\$ 2,770,224
000410	Annex 11	Refuse Collection & Disposal Services	1	Lot	\$ 113,143
000411	Annex 12	Street Sweeping Services	1	Lot	\$ 81,271
000412	Annex 13	Supply Services	1	Lot	\$ 173,236
000413	Annex 14	Mess Attendant Services	1	Lot	\$ 423,053
000414	Annex 15	B0Q/BEQ Operation Services	1	Lot	\$ 400,561
000415	Annex 16	Guard Mail Services	1	Lot	\$ 206,114
000416	Annex 17	Fire Protection Services	1	Lot	\$ 1,638,880
000417	Annex 18	Security Services	1	Lot	\$ 2,633,700
000418	Annex 19	Facility Maintenance Support	1	Lot	\$ 95,462
000419	Annex 20	Engineering Services	1	Lot	\$ 432,370
000420	Annex 21	Building/Structures Maintenance Services	1	Lot	\$ 4,269,598
000421	Annex 22	Crane Maintenance Services	1	Lot	\$ 309,780
000422	Annex 23	Crane Maintenance Services (SWFPAC)	1	Lot	\$ 287,015
TOTAL PRICE LINE ITEM 0004					\$ 23,564,048

APPENDIX D. DATA ITEM DESCRIPTION REPORT 2.20

DATA ITEM DESCRIPTION

DID REPORT NUMBER AND TITLE

2.20 FY 1990 and Subsequent Year BOS Lump Sum Manhour Quarterly Report

DESCRIPTION/PURPOSE

Provide a detailed summary of manhours expended during the reporting period displaying the current and subsequent fiscal years separately. The level of detail to be reported for the current year will be identified by SUBASE Bangor's Budget Branch no later than 15 days prior to the commencement of each new fiscal year except for FY 1990 which will be provided by the last working day of July.

APPLICATION/INTERRELATIONSHIP

For budgetary purposes

PREPARATION INSTRUCTIONS

1. Provide DID Report Number and Title

2. Report hours to the tenths of an hour

3. Provide two reports as follows:

a. BOS Lump Sum Quarterly Manhour Report by Command/By Annex - Display the manhours for each command to the level of detail identified by SUBASE Bangor's Budget Branch. Provide an annex total between annexes with a command total at the conclusion of each command's data. Page break at each change in command. Provide a final total of all manhours at the end of the listing.

b. BOS Lump Sum Quarterly Manhour Report by Annex/By Command - Display the manhours for each annex to the level of detail identified by SUBASE Bangor's Budget Branch. Provide a command total between commands with an annex total at the conclusion of each annex's data. Page break at each change in annex. Provide a final total of all manhours at the end of the listing.

4. Submit current period and year to date manhour data on an IBM-compatible non-compacted, 5-1/4" diskette, which contains a D-BASE IV file with 128 position records for any current year detail data reported in para 3.a and b above. Provide a separate diskette for each command containing only that command's data. Each data file will be labeled as follows:

POSITION	LENGTH	DATA ELEMENTS
1-6	6	Job Order Number
7-18	12	Quarterly Manhours (0000000000.0)
19-30	12	Cumulative Manhours by FY (0000000000.0)
31-128	98	Leave Blank

Provide a separate diskette for each command containing only that command's data.

---ACTUAL INFORMATION PROVIDED IN THE SPECIFICATION---

NOTE: This Statement of Work is prepared in a tabular format using five (5) parallel columns. Each column and the data contained within is further defined below. Each "row" of columns (identified by a separate paragraph number) are interrelated with no column, or information, standing alone.

TABULAR FORMAT

APPENDIX E. TABULAR FORMAT

ITEM NO.	PERFORMANCE REQUIREMENT	RELATED REQUIREMENTS OR INFORMATION	WORKLOAD DATA	MINIMUM STANDARDS
08/09/90 9:37	This column provides paragraph identification. The numbers reflect entire, paragraph, and subparagraph.	The information provided in this column identifies any related requirements or additional information such as further test description, applicable instructions, references, or requirements that support or further define the performance requirement identified in column 2. When referenced, only those portions of the instructions/documents pertaining the performance requirement apply.	The information provided in this column represents the quantity of services the Government anticipates and expects the Contractor to provide. Items annotated by "Info:" are provided for informational purposes only, does not represent anticipated workload, and will be dependent on the Contractor's methods, procedures, and controls.	The information provided in this column represents the minimum performance standard, level of service, timeliness, or quality of outputs the Contractor shall provide.

LIST OF REFERENCES

1. Federal Acquisition Regulations, Subpart 16.3, Cost-Reimbursement Contracts.
2. VTN Engineers Planners Study, Public Works Study Trident Support Site, Bangor, Washington, December 1976.
3. Department of Defense Federal Acquisition Regulations Supplement, Subpart 216.4, Incentive Contracts.
4. Interview between Paul Anderson, Comptroller, Naval Submarine Base, Bangor, WA and the author, 27 September 1990.
5. Interview between Mona Chambers, Contract Specialist, Naval Submarine Base, Bangor, WA and the author, 27 September 1990.
6. Telephone conversation between Kanita Mallon, Code 21C, Naval Facilities Engineering Command, Alexandria, VA and the author, 23 October 1990.
7. Telephone conversation between Mack Whisener, Code 18C, US Naval Station, Roosevelt Roads, PR and the author, 16 November 1990.
8. Telephone conversation between Roney Ches, Code 2836, Naval Weapons Center, China Lake, CA and the author, 7 November 1990.
9. Telephone conversation between Ann Wuete, Code PW4, Naval Air Station, Whidbey Island, WA and the author, 5 November 1990.
10. Telephone conversation between Barbara Wafford, Code 18, Naval Air Station, Whiting Field, FL and the author, 5 November 1990.
11. Telephone conversation between Vernon Funch, Code CR-1, Naval Air Station, Fallon, NV and the author, 7 November 1990.

12. Telephone conversation between Gail Barrett, Code 1812, Naval Air Station, Jacksonville, FL and the author, 5 November 1990.
13. Telephone conversation between Ellen Berblinger, Code 70, Naval Air Facility, El Centro, CA and the author, 13 November 1990.
14. Telephone conversation between Contract Specialist, Code N53, Naval Submarine Base, Kings Bay, GA and the author, 30 November 1990.
15. Comptroller, Naval Submarine Base, Bangor, WA memorandum, Firm Fixed-Price Award Fee Contract vs. Fixed-Price Incentive Fee Contract, 29 November 1990
16. Comptroller of the Navy Manual, Volume 2, Chapter 4, Accounting Classifications.
17. Telephone conversation between Paul Anderson, Comptroller, Naval Submarine Base, Bangor, WA and the author, 29 November 1990.

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